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(54) Ostomy bags

(57) A surgical drainage bag 1 has two
walls of a plastics material which is
impermeable to liquids and gases. The

said walls are secured together at their
peripheral edges. An inlet opening 3
extends through a rear wall 2 of the
bag. A non-occlusive fixing flange 5 of a
micro-porous material is disposed to
the rear of the rear wall of the bag and
has an opening surrounding the inlet
opening 3 in the rear wall of the bag. A
layer of a non-occlusive adhesive is
provided on the rear surface of fixing
flange 5. A mounting ring 8 of a
material which is impervious to liquids
and gases surrounds the inlet opening
3 in the rear wall 2 of the bag and has an
area sealed to the rear wall of the bag
and another area overlapping a portion
of the rear surface of the fixing flange.
The fixing flange 5 is secured between
the mounting ring 8 and the rear wall 2
of the bag. A layer 9 capable of
adhering to the skin of a patient is
secured to the rear wall of the mounting
ring 8.

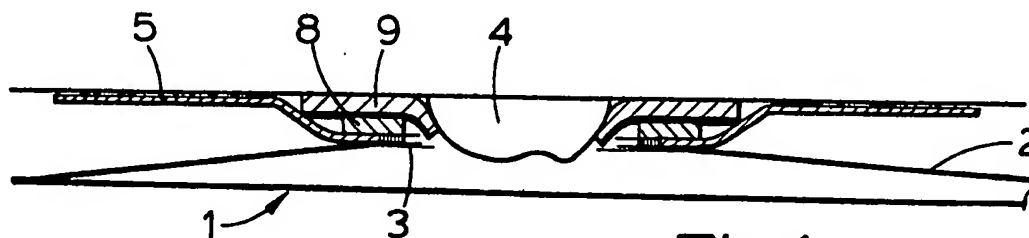
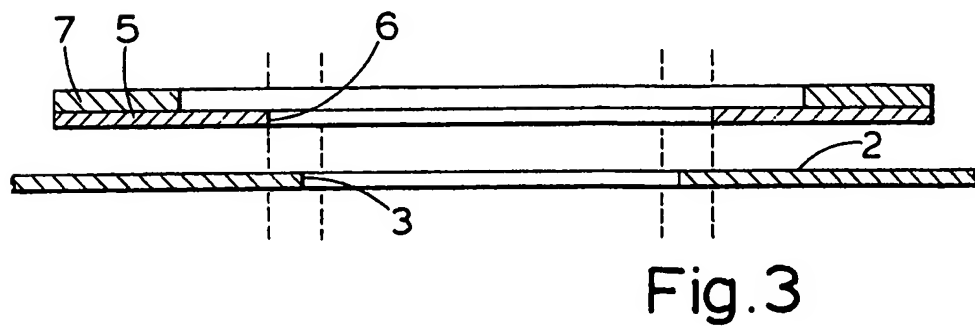
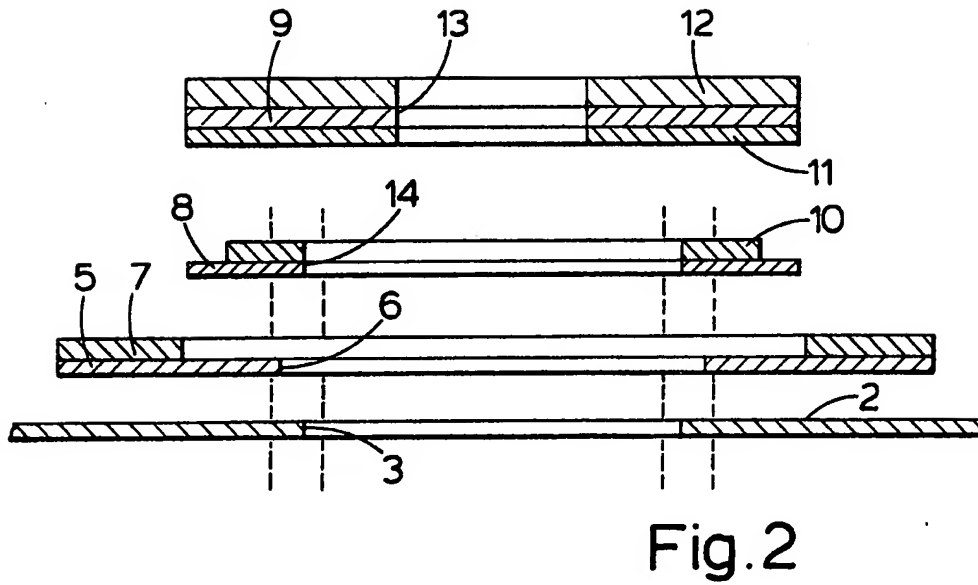
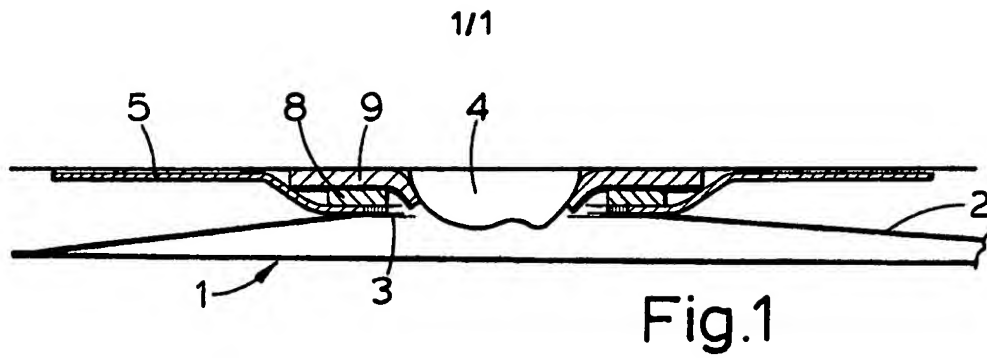


Fig.1

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SPECIFICATION

Surgical drainage bags

5 This invention relates to surgical drainage bags such as are commonly used by ileostomy or colostomy patients. Such bags are commonly known as "ostomy" bags and they will be so described herein.

Ostomy bags are commonly made of two sheets of flexible plastics material arranged in face contact and welded or otherwise sealed at the edges. The plastics material is impermeable to liquids and gases. When the two sheets are sealed together, there is provided a bag with two walls one of which will, in use, contact the body of the patient. This wall will herein be referred to as the rear wall. Such a bag has an inlet in the rear wall capable of receiving the stoma of a patient so that the contents of the intestine of the patient can pass from the stoma into the bag. The bag is commonly surrounded by a fixing ring, usually called a fixing flange, which is secured to the bag and normally carries an adhesive by which the bag can be secured to the skin of the patient. The bag may be further secured by a belt or the like passed round the body of the patient and fixed to the bag in any suitable way.

A disadvantage of such bags as commonly in use at the present time is that the fixing flange and adhesive are occlusive and some patients have a skin which is sufficiently sensitive to be undesirably affected by such an occlusive covering. An object of the present invention is to provide a bag which will not have this disadvantage.

Accordingly, the present invention provides a surgical drainage bag which has two walls of a plastics material which is impermeable to liquids and gases, the said walls being secured together at their peripheral edges, and an inlet opening through a rear wall of the bag wherein a non-occlusive fixing flange of a microporous material is disposed to the rear of the rear wall of the bag and has an opening surrounding the said inlet opening in the rear wall of the bag; a layer of a non-occlusive adhesive being provided on the rear surface of the fixing flange; wherein a mounting ring of a material which is impervious to liquids and gases surrounds the said inlet opening in the rear wall of the bag and has an area sealed to the rear wall of the bag and another area overlapping a portion of the rear surface of the fixing flange, the said fixing flange being secured between the mounting ring and the rear wall of the bag; and wherein a layer capable of adhering to the skin of a patient is secured to the rear wall of the mounting ring.

55 The material of the bag and of the mounting ring is preferably polyvinylidichloride (PVDC). The adhesive layer is preferably of a hydrophilic polymeric material.

The bag of this invention is more comfortable to wear than most bags at present in use and has a greater security against leakage of the contents of the bag.

The accompanying drawings schematically illustrate some preferred embodiments of the invention.

65 In the drawings;

Figure 1 is a schematic sectional view of a bag constructed according to the invention fixed to the body of a patient,

70 Figure 2 is an exploded sectional view of part of the bag, and

Figure 3 is an exploded sectional view of a modification.

In the illustrated embodiment of the invention, an ostomy bag 1 is made of a plastics material which is impermeable to gases and liquids, preferably PVDC. The rear wall 2 of the bag has an inlet opening 3 through which the stoma 4 of a patient can pass.

A fixing ring or flange 5 is located adjacent to the rear wall 2 of the bag. This flange 5 has an opening 6 which is at least as large as the opening 3 in the bag, but may be larger as shown in Figures 2 and 3. This fixing flange 5 is made of a non-occlusive, microporous material which is preferably a spun-bonded polymer, tissue or perforated plastics material having non-occlusive adhesive on its rear surface. A layer 7 of a release material may be attached to the adhesive rear surface of the fixing flange 5. The fixing flange 5 is located around the inlet opening 3 in the rear wall 2 of the bag by means of a mounting ring 8 of a material which is impermeable to liquids and gases, and which is preferably the same material as the material of the bag 1. The mounting ring also has an area which overlaps the rear surface of the fixing ring which is therefore positioned and secured between the mounting ring and the rear wall of the bag. The mounting ring 8 has an area which is secured to the rear wall of the bag preferably by radio frequency welding. The extent of the weld is indicated by the broken lines in Figures 2 and 3.

100 In the embodiment illustrated in Figure 2 the weld between the mounting ring 8 and the rear wall of the bag 2 overlaps the area of the fixing flange 5, overlapped by the mounting ring, whereas in the embodiment of Figure 3 the opening 6 in the fixing flange 5 is of a larger size so that there is no overlap between the weld and the flange 5.

In both embodiments, since the mounting ring 8 is of material impermeable to liquids and gases and since it is secured to the rear wall 2 of the bag which is also made of a material that is impermeable to liquids and gases, there is no leakage of the contents of the bag through to the micro-porous fixing flange 5.

The mounting ring 8 also provides a platform for a layer 9 of material intended to seal and secure the bag to the body of a patient, and also to protect the skin around the stoma. The layer 9 is secured to the mounting ring 8 by means of an adhesive 10, which is attached to the layer of plastics film 11. A layer 12 of release paper is attached to the rear surface of the layer 9.

The layer 9 may be of any suitable material capable of being secured on one side to the mounting ring 8 and on the other side capable of adhering to the body of a patient. The layer 9 is preferably, but not essentially, of the hydrophilic polymeric skin-care material known under the trade mark SEEL-A-PEEL and described in the published British Patent Specification No. 2046764A.

As will be clearly seen in the drawings, an opening 13 in the layer 9 is smaller than the openings 14, 6 and

3 in the mounting ring, fixing flange and rear wall of the bag respectively. This enables the material of the layer 9 to be "formed-up" around the stoma 4 of the patient as shown in Figure 1 and in addition to layer 9
 5 maybe cut so as to fit closely around an irregularly shaped stoma. This improves the seal and reduces the risk of leakage. The plastics film layer 11 is laminated into the material of the layer 9. This plastics film layer prevents the layer 9 from sticking to the
 10 front wall of the bag.

As will be clearly seen in Figure 2 of the drawings, the opening 6 in the fixing flange 5 is larger than the opening 3 in the rear wall of the bag. The opening 14 in the mounting ring 8 is smaller than the opening 6.
 15 The opening 13 in the layer 9 is smaller than any of the other openings.

The use of the non-occlusive micro-porous material for the fixing flange 5 makes the device more comfortable to wear than is possible with most known ostomy devices. In addition, the flange 5
 20 assists in securing the device to the body of the patient and in preventing the outside edges of the layer 9 from lifting as a result of catching on clothing.
 CLAIMS

25 1. A surgical drainage bag which has two walls of a plastics material which is impermeable to liquids and gases, the said walls being secured together at their peripheral edges, and an inlet opening through a rear wall of the bag; wherein a non-occlusive fixing
 30 flange of a micro-porous material is disposed to the rear of the rear wall of the bag and has an opening surrounding the said inlet opening in the rear wall of the bag; a layer of a non-occlusive adhesive being provided on the rear surface of the fixing flange;
 35 wherein a mounting ring of a material which is impervious to liquids and gases surrounds the said inlet opening in the rear wall of the bag and has an area sealed to the rear wall of the bag and another area overlapping a portion of the rear surface of the
 40 fixing flange, the said fixing flange being secured between the mounting ring and the rear wall of the bag; and wherein a layer capable of adhering to the skin of a patient is secured to the rear wall of the mounting ring.

45 2. A bag as claimed in claim 1 wherein the fixing flange is made of a spun-bonded polymer which is non-occlusive and micro-porous.

3. A bag as claimed in claim 1 wherein the fixing flange is made of a tissue.

50 4. A surgical drainage bag as claimed in any one of the preceding claims wherein the layer capable of adhering to the skin of a patient is of a hydrophilic polymeric material.

5. A surgical drainage bag as claimed in claim 1
 55 wherein the fixing flange has an opening which surrounds and is at least as large as that in the inlet opening of the bag, the mounting ring has an opening which is smaller than the opening in the fixing flange, and the opening in the layer capable of adhering to
 60 the skin of the patient is smaller than any of the other openings.

6. A bag as claimed in any one of the preceding claims wherein the mounting ring is secured to the rear surface of the bag by a radio-frequency weld which
 65 overlaps the fixing flange.

7. A surgical drainage substantially as described with reference to the accompanying drawings.

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